NOTE VI.

ON A COLLECTION OF MAMMALS FROM EAST-SUMATRA.

BY

Dr. F. A. JENTINK.

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Dr. B. Hagen, the well known passionate naturalist, lived several years in Tandjong-Morawa, later in Medan, East-Sumatra, Deli. He published in »Das Ausland, 1881" a paper, entitled »Vorläufige Mitteilungen über die Fauna Ost Sumatras." In this paper he solely treated the Mammals, especially based upon the collections made by himself and by his hunters. Afterwards he presented his whole immense collection to the Leyden Museum, several thousands specimens of Mammals, Birds, Reptiles and Insects.

Up to the investigations made by Dr. Hagen about nothing was known concerning the Mammals of the eastern part of Sumatra, and so I think that a review of his collections will be very wellcome to naturalists, the more as the Fauna of Sumatra is one of the bases upon which Wallace built his wide-stretching speculations.

Wallace (the Malay Archipelago, 1869) made inquiries about the Orang-Utan (not Orang-Outang as Blanford writes, see the Fauna of British India, a. s. o., Mammalia, Part I, 1888, p. 4), but none of the natives had ever heard of such an animal, nor could he find any of the Dutch officials who knew anything about it. He concluded therefore, that it does not inhabit the great forest plains in the East of Sumatra, but is probably confined to a limited region in the north-west. Von Rosenberg (Der Malayische Archipel, 1878) related: »der Orang-

Utan wird nur in den flachen, sumpfigen Küstenwäldern angetroffen, welche nördlich von Tapanoli das Land bis Singkel überziehen und ihrer Unzugänglichkeit wegen nur selten von einem menschlichen Fusse betreten werden." Some years ago there was living in the Rotterdam-Zoological Gardens an Orang-Utan from the interior of Padang, West-Sumatra. In 1875 my brother-in-law hunted in Langkat, Deli, East-Sumatra, a very stout Orang-Utan, but unhappily the chinese-workmen had cut it to pieces before he could prevent it.

Dr. Hagen wrote in *Das Ausland*: »Unter den Affen müssen wir billigerweise zuerst erwähnen den Orang-Utan. Jeder Malaye hier auf der Ostküste kennt seinen Namen, Mawas oder Mauas, aber Alle stimmen ebenso darin überein, dass er auf der Ostküste nur etwa noch in der Provinz Oberlankat gegen Atjeh hin vorkomme. Vor einigen Tagen noch besuchte mich ein Malaye, der bei seinen Wanderungen in den naheliegenden Bergen, etwa vier Tagereisen von Tandjong-Morawa, ein Mawas-paar in einer tiefen Waldschlucht entdeckte, und sich anheischig machte, eines der Thiere zu erlegen. Einer meiner Diener, ein gesetzter, glaubwürdiger Malaye aus der Gegend von Kap Tamian, erzählte mir, vor mehreren Jahren habe ein grosser Mawas aus seinem Kampong ein kleines Kind ergriffen, mit seinen Armen erdrückt und bei der sofort angestellten Verfolgung sich mit der Leiche auf einen nahen, nicht besonders hohen Baum geflüchtet, allwo er von den wütend nachsetzenden Malayen, worunter auch mein Gewährsmann sich befand, mit Spiessen und spitzen Bambus erstochen wurde. Das der Orang-Utan früher auf der Ostküste viel häufiger vorkam, ist für mich schon wegen der allgemeinen Kenntniss seines Namens ausser allem Zweifel; von dem Schrabrakentapir z. B., der auch nur sehr lokal vorkommt, hat kein Eingeborner hiesiger Gegend eine Ahnung."

From the foregoing facts we are allowed to conclude, that the Orang-Utan is to be found along the coasts of the northern half of East- and West-Sumatra.

In Dr. Hagen's collections are several Mammals hitherto not recorded from Sumatra, but known from Borneo, f. i. *Arctogale stigmatica*, *Hemigalea derbyana*, *Herpestes brachyurus*, *Cynogale bennettii*, *Ptilocercus lowii* and *Rhizomys dekan.*

Leaving the bats out of consideration we see that the more our knowledge increases the more the uniformity of the Borneo- and Sumatra-fauna comes to light, but at the same time it appears that the Mammalian Fauna of East-Sumatra agrees much more with the Borneo- than with the West-Sumatra Fauna. West-Sumatra has several species hitherto not found in East-Sumatra and Borneo, so Borneo has several species not recorded from West-Sumatra, but with two or three insignificant exceptions East-Sumatra has all its Mammals in common with Borneo, meanwhile none of the above named characteristic species in Hagen's collection from Deli has been found in the tolerably well known Western half of Sumatra. Dr. Hagen observed in Deli, besides the species enumerated below and the above mentioned *Simia satyrus*, the following species: *Felis tigris*, n. i. *Rimau* or *Harimau*; *Felis pardus*, var. *melas*, n. i. *Rimau kombang*; *Ursus malayanus*, n. i. *Bruang*; *Sorex* sp.? and *Mus* sp.? n. i. *Tikus.* With five exceptions all the Mammals, collected by Dr. Hagen, are from Deli, Serdang, Tandjong-Morawa; one is from the Toba-plains, and four are from Bengkalis and Siak, the two latter localities opposite Singapore.

Simiae.

1. *Hylobates syndactylus* Cuvier.

Tandjong-Morawa, Marolam and Bander Labuan. n. i. *Imbau*, rarely *Siamang.*

Hab. Sumatra and perhaps nowhere else, as the localities, Southern Tenasserim and Malayan Peninsula, given by Helfer and Wallace are very doubtful.

2. *Semnopithecus albocinereus* Schinz.

Dr. Hagen (Das Ausland, 1881, p. 554) wrote: »zwei blaugraue *Semnopitheci* mit langen Schwänzchen und weisser Brust und Bauch. Der eine, von den Eingebornen *Lutong* genannt, ist sehr häufig, der andere, mit fleischfarbenen Gesicht, dessen obere Hälfte schmutzig ultramarin blau ist, mit samtschwarzen Hand- und Fuss-tellern, ist ebenfalls nicht selten, aber sehr scheu und verborgen. Sein Jugendkleid ist goldgelb. Er heisst bei den Malayen *Gjak-gjak* wegen seines Geschreis, das, langsam beginnend, allmählich schneller wird; es ist ein lautes, helles, gellendes Gjak-gjak-gjak-gjakjakjakjak. Morgens und gegen Abend hörtt man dasselbe am häufigsten."

In Dr. Hagen's collections from Tandjong-Morawa are four skulls labeled *Lutong*, and three labeled *Gjak-gjak*. The *Lutong*-skulls agree with the skulls of *Semnopithecus albocinereus* in our Museum, a monkey with white breast and belly and known from Malacca and East-Sumatra.

Prof. Schlegel (Simiae, 1876, p. 39) observed: »le squelette du *S. albocinereus* diffère de celui du *S. mitratus* en ce qu'il offre une paire de côtes de plus, savoir treize paires", but here he was not correct, for one of the skeletons (Schlegel, N°. 9) has 13 pairs of ribbs and the other (Schlegel, N°. 10) presents 12 pairs and no trace of a 13th pair. So that in this, like in the next species, the number of ribbs is very variable.

The skulls *f*, *g* and *h* (Jentink, Catalogue Ostéologique, 1887, p. 10) belong to *S. albocinereus* and not to *S. ferrugineus*.

3. *Semnopithecus melalophus* Raffles.

Tandjong-Morawa.

Prof. Schlegel (Simiae, 1876, p. 42) separated under the name *Semnopithecus ferrugineus* the Monkeys from Padang from their congeners living in the neighborhood of

Bencoelen and Indrapore, and distinguished exteriorly by a slight difference in tinge, but according to Schlegel *S. ferrugineus* has 13 pairs of ribbs, meanwhile *S. melalophus* presents 12 pairs.

Our Museum procured from the Dutch Scientific Expedition to Sumatra skins and skeletons of a Monkey, from the interior of Padang, belonging to *S. melalophus*. The skeletons (Jentink, Catalogue Ostéologique, 1887, p. 10) however present the following numbers of ribbs: sk. *b* has 13 ribbs to the left side and 12 to the right side, sk. *c* has 12 to the left and 13 to the right, sks. *d* and *e* present 12 ribbs to the right and 12 to the left. Moreover in sk. *c* of the so called *S. ferrugineus* I find 13 ribbs to the right and 12 to the left, and not 13 pairs of ribbs as Schlegel stated in his Catalogue. There is thus no reason to accept Schlegel's new species, as the number of ribbs, being preponderant in Schlegel's opinion, is so very inconstant.

The young of Hagen's Monkey being *golden-yellow* and the skulls of the adult specimens agreeing very well with the skulls in our collection, I refer these individuals to the above named species, so that *S. melalophus* now is known from the Malayan Peninsula and from East- and West-Sumatra.

4. *Cercocebus cynamolgos* Schreber.

Tandjong-Morawa. n. i. *Kara.*

In our Museum are specimens from Rangoon, Cambodga, Malacca, Sumatra, Borneo, Java, Timor and the Philippines.

5. *Macacus nemestrinus* Desmarest.

Tandjong-Morawa. n. i. *Bru.*

Hab. Tenasserim, Malayan Peninsula, Sumatra, Banka and Borneo.

6. *Nycticebus tardigradus* Linnaeus.

Tandjong-Morawa. n. i. *Bukang* or *Piucha tingaling.*

Hab. Bengal, Malayan Peninsula, Sumatra, Borneo and Java.

Although I cannot accept with Schlegel a separation of the Java-specimens under the name of *Nycticebus javanicus* Geoffroy, as I find no difference whatever in the skulls or other bony parts and as the supposed difference in color is merely a difference in tinge, it however is a fact, that, at least in our skeletons — two of *N. tardigradus* and five of *N. javanicus* — the number of dorsales and lumbares is 24 in the Java-specimens, meanwhile it is 22 in the true *N. tardigradus* (Schlegel, Monographie, Simiae).

7. *Galeopithecus volans* Linnaeus.

Tandjong-Morawa.

Hab. Tenasserim, Siam, Malayan Peninsula, Sumatra, Banka, Borneo, Java and the Philippines.

Carnivora.

8. *Felis macrocelis* Temminck.

Tandjong-Morawa. n. i. *Rimau kitchil* or *akar.*

Known from Sumatra and Borneo.

9. *Felis planiceps* Vigors and Horsfield.

Deli.

Hab. Sumatra and Borneo.

10. *Felis minuta* Temminck.

Tandjong-Morawa.

Hab. Bengal, Ceylon, Siam, Malayan Peninsula, Sumatra, Borneo and Java.

11. *Paradoxurus musanga* Gray.

Tandjong-Morawa.

Hab. Burma, Siam, Malayan Peninsula, Sumatra, Borneo, Java, Bavean-islands, Timor, Ceram and Sulla-Bessie.

12. *Paradoxurus leucomystax* Gray.

Toba-plains.
Known from Sumatra and Borneo.

13. *Arctogale stigmatica* Temminck.

Tandjong-Morawa.
As I remarked in the Notes from the Leyden Museum, 1885, p. 34, this species was formerly only known from Borneo.

14. *Hemigalea derbyana* Gray.

Tandjong-Morawa.
Gray described in 1837 an animal from an unknown locality under the name of *Paradoxurus derbyanus* and another new species, *Paradoxurus? zebra*, from a drawing. In the »Verhandelingen, 1839—1844", an animal has been figured which had been described in 1838 by S. Müller as *Viverra boiei* from Borneo. Later on (P. Z. S. L. 1864) Gray united his two new species with Müller's species under the name of *Hemigalea hardwickii*: under that title, *Viverra hardwickii*, Gray had described a drawing said to have been made after an animal from Malacca, found in the collection of Major Farquhar, cf. Spic. zool. 1830.
In our Museum are specimens from the two certain localities, Sumatra and Borneo.

15. *Herpestes brachyurus* Gray.

The *Musang turon*, as this species is called on the Malayan Peninsula, seems to be a very rare animal in the countries where it lives, or very difficult to procure, as only the following few specimens have been recorded.
The type-specimen is in the British Museum and described by Gray in 1837 as inhabiting Indian islands. Cantor, 1846, recorded this species in his Catalogue from the Ma-

layan Peninsula. Another specimen, figured by Gray in 1849, was one of the scientific results of the Voyage of the Samarang; it had been collected in Borneo. The lower jaw of a skull of another specimen has been figured by de Blainville in his Ostéographie, but he did not mention the origin.

I have a third locality to add to the two hitherto known ones, viz.: Siak, as Dr. Hagen presented to the Museum a beautiful adult female with its skull from that locality. Length of the skull 91 mm., width at zygomatic arches 52 mm.; also about the dimensions given by Gray in his Catalogue of Carnivorous a. s. o. Mammalia, 1869, p. 154.

16. *Cynogale bennettii* Gray.

Gray described this species after a specimen in the British Museum from Sumatra, as he wrote in 1837; it seems however that the named locality was incorrect, for in the Catalogue of the Bones of Mammalia, 1862, the skull, belonging to a specimen of this species in the British Museum had Borneo for locality, agreeing with the habitat given by Gray for the specimen in the Catalogue of Carnivorous a. s. o. Mammalia, 1869. In the »Verhandelingen, etc." has been described and figured another specimen, under the name of *Potamophilus barbatus*, too from Borneo. So that up to the year 1882 Borneo was the certain patria. In 1882 however Dr. Hagen procured a young specimen from Tandjong-Morawa, Deli. Its skull is in our Museum.

17. *Putorius nudipes* Cuvier.

Specimens from Tandjong-Morawą.

It is not very clear why Dr. Gray changed Cuvier's specific title and called the species *Gymnopus leucocephalus*, see P. Z. S. L. 1865, p. 119.

Known from Sumatra and Borneo.

18. *Aonyx leptonyx* Horsfield.

Tandjong-Morawa. n. i. *Bomprang.*
Known from Sumatra, Borneo and Java.

Ruminantia.

19. *Russa equina* Cuvier.

Tandjong-Morawa. n. i. *Rusa.*
Known from Sumatra, Banka and Borneo.

20. *Cervulus muntjac* Zimmermann.

Tandjong-Morawa. n. i. *Ketjang.*
Known from Sumatra, Borneo and Java.

21. *Tragulus kanchil* Raffles.

Tandjong-Morawa.
Known from Sumatra, Malacca and Java.

22. *Tragulus napu* Cuvier.

Tandjong-Morawa.
Known from Sumatra, Banka and Borneo.

Pachydermata.

23. *Sus vittatus* S. Müller.

Tandjong-Morawa. n. i. *Babi-Utan.*
Known from Sumatra and Java.

24. *Cerathorhinus sumatrensis* Cuvier.

Tandjong-Morawa. n. i. *Balsdak.*
Hab. Sumatra and Borneo.

25. *Elephas sumatranus* Temminck.

Tandjong-Morawa. n. i. *Gadja.*
Known from Ceylon, Sumatra and Borneo.

Rodentia.

26. *Pteromys nitidus* Geoffroy.

Tandjong-Morawa. n. i. *Gurupung.*

There are in our Museum specimens from Sumatra, Malacca, Borneo and Java.

Besides skulls, unmistakebly belonging to this species, there is in Dr. Hagen's collection a skin, *without skull*, which I refer with some doubt to this species. It is apparently a young individual, as the feet are too large in proportion to the rest of the animal. Head, upperparts, tail and feet are black with a reddish tinge, underparts brownish red. As there is only a single species of *Pteromys* known as inhabiting Sumatra, viz.: *Pteromys nitidus*, and as Dr. Hagen collected this species too in Tandjong-Morawa, so I regard his young specimen as representing a black variety of *Pteromys nitidus* Geoffroy. Length of head and body 280 mm., length of tail with tuft 440 mm., length of hind foot with claws 57 mm.

27. *Sciuropterus hageni* n. sp.

Deli.

This new species is a good deal larger than *Sciuropterus setosus* Temminck (*Sciuropterus pearsonii* Gray) from Sumatra, nay than any other *Sciuropterus*-species from the Malayan Archipelago and thus at first sight is distinguished by its size. Length of head and body . . . 313 mm.

»	» tail with tuft. . . .	245
»	» hindfoot.	45
»	» skull	54
»	» nasals.	16
»	» palate.	25
»	» upper molar series.	11
Width at zygomatic arches . .		34

In the upper molar series the small first premolar is present. Incisors orange colored.

Hairs of head and upperparts striking coarse, longer on the parachute; tail markedly distichous.

Hairs of upperparts of head dark slaty, brown tipped, with a subapical white ring; a broad band of black hairs runs from the middle of the nose round the eyes to the ears. Hairs of back dark slaty, brown tipped, with a yellow brown subapical ring. Hairs of parachute and legs black with a broad red-brown tip; sides of parachute fringed with pure white hairs. Feet brown.

Underparts of head, sides of neck, belly and inside of legs of a pure white, with a reddish tinge however towards the abdomen and hind feet. The hairs of the tail are white at their base and have brown colored tips.

28. *Sciurus bicolor* Sparrmann.

Deli.

Hab. Tenasserim and Malayan-Peninsula (Oldfield Thomas), Sumatra and Java.

29. *Sciurus albiceps* Desmarest.

Bengkalis.

Known from the Malayan-Peninsula, Sumatra, Borneo and Java.

30. *Sciurus tenuis* Horsfield.

East-Sumatra.

Hab. Malayan-Peninsula, Sumatra and Borneo.

31. *Sciurus prevostii* Desmarest.

Siak.

Known from the Malayan-Peninsula, Sumatra, Banka, Biliton, Borneo, Java and Celebes.

32. *Sciurus badjing* Kerr.

Deli.

In our Museum are specimens from China, Nepal, Malayan-Peninsula, Sumatra, Borneo, Java and Celebes.

33. *Mus decumanus* Pallas.

Siak.

A very badly preserved skin, without skull. It is reddish brown, tail blackish. I think it to be *Mus decumanus*.

34. *Rhizomys dekan* Temminck.

Tandjong-Morawa.

Known from Siam, the Malayan-Peninsula and Sumatra. This species had hitherto not been found to exist in Sumatra. A skull in Dr. Hagen's collection demonstrates that the species is living there.

35. *Acanthion mülleri* Jentink.

Tandjong-Morawa.

Hab. Sumatra.

36. *Acanthion javanicum* Cuvier.

Tandjong-Morawa. n. i. *Lanta*.

Hab. Sumatra (Borneo?) and Java.

Insectivora.

37. *Tupaja javanica* Horsfield.

Tandjong-Morawa.

In our Museum are specimens from Sumatra, Banka, Borneo and Java. In the British Museum are specimens from Salangore and Johore (Oldfield Thomas, P. Z. S. L. 1886, p. 73).

38. *Tupaja tana* Raffles.

Deli.

Known from Sumatra and Borneo.

39. *Tupaja ferruginea* Raffles.

Deli.

Known from Tenasserim and the Malayan-Peninsula (apud Oldfield Thomas, l. c.), Sumatra, Borneo and Java.

Dr. Günther, P. Z. S. L., 1876, p. 427, distinguished three varieties of *Tupaja tana* Raffles, viz.: *tana*, *speciosa* and *chrysura*. The latter is from the Mainland of Borneo, opposite to Labuan and figured on Plate XXXVI. I find in Dr. Hagen's collection a specimen of *T. ferruginea* with a golden yellow tail, with a reddish tinge, like Dr. Günther's variety of *T. tana*. If naturalists think it necessary to give a name to every variety of a given species, what is impracticable in my view, the mentioned specimen may be entitled *Tupaja ferruginea*, var. *chrysura*.

40. *Ptilocercus lowii* Gray.

Tandjong-Morawa.

Known from Sumatra, Banka and Borneo.

Dr. Hagen's specimen is the first representative of the species in Sumatra. Cf. Notes from the Leyden Museum, 1885, p. 37.

41. *Gymnura rafflesii* Vigors and Horsfield.

Tandjong-Morawa.

Hab. Malayan-Peninsula and Sumatra.

Chiroptera.

42. *Pteropus edulis* Geoffroy.

Tandjong-Morawa.

In our Museum are specimens from Malacca, Sumatra, Banka, Borneo, Celebes, Philippine-islands, Java, Bali, Lombock, Timor and Banda.

43. *Macroglossus minimus* Geoffroy.

Deli.

In our Museum are specimens from Sumatra, Java, Celebes, Amboina, Arou-islands, and New Brittain. According to Dobson from the Himalaya through Burma to North- and West-Australia.

44. *Cynopterus marginatus* Geoffroy.

Deli and Siak.

In the Leyden Museum are specimens from Ceylon, Bengal, Sumatra, Borneo, Java, Celebes, Sanghi-islands, and Sulla-Bessie.

45. *Rhinolophus affinis* Horsfield.

Deli.

In our Museum are specimens from Calcutta, Sumatra, Java and Celebes. According to Dobson also known from the Himalaya to Cape Comorin, Ceylon and Borneo.

46. *Vesperus pachypus* Temminck.

Deli.

The types from Java are in our Museum, and one specimen from Celebes.

47. *Vesperugo abramus* Temminck.

Deli.

In our Museum are specimens from Brunswick, St. Gothard, Sarepta, Triest, Madagascar, South-Africa, Japan, Ceylon, Java, Timor, Ceram and the Arou-islands.

48. *Emballonura semicaudata* Peale.

Deli.

Known from Goram, Pelew, New Hebrides, Fiji-islands and Navigators' islands.

49. *Nyctinomus mops* Cuvier.

Deli.

A very rare species, only known from Sumatra.